

Service
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Service Manual

TABLE OF CONTENTS

	Page
Location of PC Boards & Versions Variation	1
Specifications	2
Safety Instruction	3
Software Upgrade Instruction.....	4
Troubleshooting.....	5
Disassembly Instructions	6
Set Block & Wiring Diagram.....	7
Circuit Diagram & PCBA Layout.....	8
Set Mechanical Exploded View	9
Revision List.....	10

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PCB BOARD LOCATION:

DVP2880/98/61:

Specifications



Note

- Specifications are subject to change without notice

Region code

This player can play discs with the following region code.

DVD region code	Countries
	Asia Pacific, Taiwan, Korea

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 200 folders and 9999 files)
- USB storage device

File format

- Video: avi, .divx, .xvid
- Audio: .mp3, .wma
- Picture: .jpg, .jpeg

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32, NTFS
- Maximum number of albums/folders: 200
- Maximum number of tracks/titles: 9999
- USB port: 5V $\pm$, 500mA
- Support USB HDD (Hard Disc Drive): an external power source may be needed

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial

- HDMI output
- Sampling frequency:
 - MP3: 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps - 320 kbps
 - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 110-240V~, 50-60Hz
- Power consumption: 11W
- Power consumption in standby mode: < 0.5W

Accessories supplied

- Remote control and one battery
- AV cables
- User manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP2880/79:

Specifications



Note

- Specifications are subject to change without notice

This player can play discs with the following region code.

DVD region code	Countries
	Australia, New Zealand

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 200 folders and 9999 files)
- USB storage device

File format

- Video: avi, .divx, .xvid
- Audio: .mp3, .wma
- Picture: .jpg, .jpeg

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32, NTFS
- Maximum number of albums/folders: 200
- Maximum number of tracks/titles: 9999
- USB port: 5V $\pm$, 500mA
- Support USB HDD (Hard Disc Drive): an external power source may be needed

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial
- HDMI output

- Sampling frequency:
 - MP3: 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps - 320 kbps
 - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 230-240V~, 50Hz
- Power consumption: 11W
- Power consumption in standby mode: < 0.5W

Accessories supplied

- Remote control and one battery
- AV cables
- User manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP2880/93:

Specifications



Note

- Specifications are subject to change without notice

Region code

This player can play discs with the following region code.

DVD region code	Countries
	China

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 200 folders and 9999 files)
- USB storage device

File format

- Video: avi, .divx, .xvid
- Audio: .mp3, .wma
- Picture: .jpg, .jpeg

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32, NTFS
- Maximum number of albums/folders: 200
- Maximum number of tracks/titles: 9999
- USB port: 5V $\overline{\text{V}}$, 500mA
- Support USB HDD (Hard Disc Drive): an external power source may be needed

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial
- HDMI output

- Sampling frequency:
 - MP3: 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps - 320 kbps
 - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 110-240V~, 50-60Hz
- Power consumption: 11W
- Power consumption in standby mode: < 0.5W

Accessories supplied

- Remote control and one battery
- AV cables
- User manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP2880/05/40/62:

Specifications



Note

- Specifications are subject to change without notice

Region code

This player can play discs with the following region codes.

DVD region code	Countries
	Europe

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 299 folders and 648 files)
- USB storage device

File format

- Video: avi, .divx, .xvid
- Audio: .mp3, .wma
- Picture: .jpg, .jpeg

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32, NTFS
- Maximum number of albums/folders: 299
- Maximum number of tracks/titles: 648
- USB port: 5V $\pm$, 500mA
- Support USB HDD (Hard Disc Drive): an external power source may be needed

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial
- HDMI output

- Sampling frequency:
 - MP3: 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps - 320 kbps
 - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D):
270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 220-240V~, 50-60Hz
- Power consumption: 11W
- Power consumption in standby mode:
< 0.5W

Accessories supplied

- Remote control and one battery
- User manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP2880/F8:

Specifications



Note

- Specifications are subject to change without notice

Region code

This player can play discs with the following region code.

DVD region code	Countries
	Latin America

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 200 folders and 9999 files)

File format

- Video: MPEG 1, MPEG 2
- Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial
- HDMI output

Main unit

- Dimensions (W x H x D): 270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 110-127V~, 60Hz
- Power consumption: 11W
- Power consumption in standby mode: < 0.5W

Accessories supplied

- Remote control and one battery

- User Manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP2880/55:

Specifications



Note

- Specifications are subject to change without notice

Region code

This player can play discs with the following region code.

DVD region code	Countries
	Latin America

Playable media

- DVD, DVD-Video, VCD, SVCD, Audio CD
- DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (maximum 200 folders and 9999 files)
- USB storage device

File format

- Video: avi, .divx, .xvid
- Audio: .mp3, .wma
- Picture: .jpg, .jpeg

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32, NTFS
- Maximum number of albums/folders: 200
- Maximum number of tracks/titles: 9999
- USB port: 5V $\pm$, 500mA
- Support USB HDD (Hard Disc Drive): an external power source may be needed

Video

- Signal system: PAL, NTSC, Multi
- Composite video output: 1 Vp-p (75 ohm)
- HDMI output: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, Auto

Audio

- 2-channel analog output
 - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
 - Coaxial
- HDMI output

- Sampling frequency:
 - MP3: 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps - 320 kbps
 - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 270 x 37.5 x 209 (mm)
- Net Weight: 1.0 kg

Power

- Power supply rating: 110-240V~, 50-60Hz
- Power consumption: 11W
- Power consumption in standby mode: < 0.5W

Accessories supplied

- Remote control and one battery
- AV cables
- AC power plug adapter
- User manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Safety instruction, Warning & Notes

Safety instruction

1. General safety

Safety regulations require that during a repair:

- . Connect the unit to the mains via an isolation transformer.
- . Replace safety components indicated by the symbol , only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

- . Route the wires/cables correctly, and fix them with the mounted cable clamps.
- . Check the insulation of the mains lead for external damage.
- . Check the electrical DC resistance between the mains plug and the secondary side:
 - 1) Unplug the mains cord, and connect a wire between the two pins of the mains plug.
 - 2) Set the mains switch the "on" position (keep the mains cord unplug).
 - 3) Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
 - 4) Repair or correct unit when the resistance measurement is less than 1M Ω .
 - 5) Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
 - 6) Switch the unit "off", and remove the wire between the two pins of the mains plug.

2.Laser safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser device unit

Type	: Semiconductor laser GaAlAs
Wavelength	: 650nm (DVD)
	: 780nm (VCD/CD)
Output power	: 7mW (DVD)
	: 10mW (DVD /CD)

Beam divergence: 60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

Service Hints

CAUTION

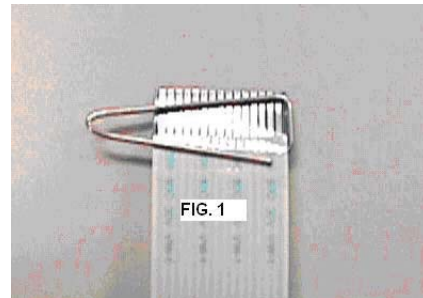
CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

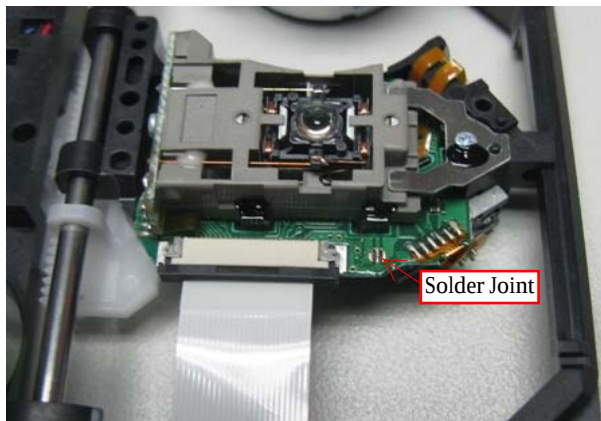
ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the defective loader :

1. Dismantling of the loader to access the ESD protection point if necessary.
2. **Solder the ESD protection point*.**
3. Disconnect flexfoil cable from the defective loader.
4. Put a paper clip on the flexfoil to short-circuit the contacts (fig.1)
5. Replace the defective loader with a new loader.
6. Remove paperclip from the flexfoil and connect it to the new loader.
7. Remove solder joint on the ESD protection point.



ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.



(ESD protection point is accessible from top of loader)

****Only applicable for defective loader needed to be sent back to supplier for failure analysis and to support backcharging evidence.***

This is also applicable for all partnership workshops.

Software upgrade

Preparation to upgrade software

- 1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:

Label: DVP3XXX (No need the label name)

File Name: DVPXXXX_XX.BIN

Power on the set and open the tray, then press <option> to check the File Name.

Note: It is required capital letter for the File System name

- 2) Burn the data onto a blank CDR

A. Procedure for software upgrade:

- 1) Power on the set and insert the prepared Upgrade CDR.
- 2) The set will start reading disc & response with the following display TV screen:

Upgrade file detected

VXX(SW VER)

<X>

<O>

- 3) Press <OK> button to confirm, then screen will display :

Upgrade file detected

UPGRADING...

Do not power off...

- 4) The upgraded tray will automatically open when files copying complete, then take out the disc.
- 5) About 1 minute later, the tray will automatically close when upgrading complete.

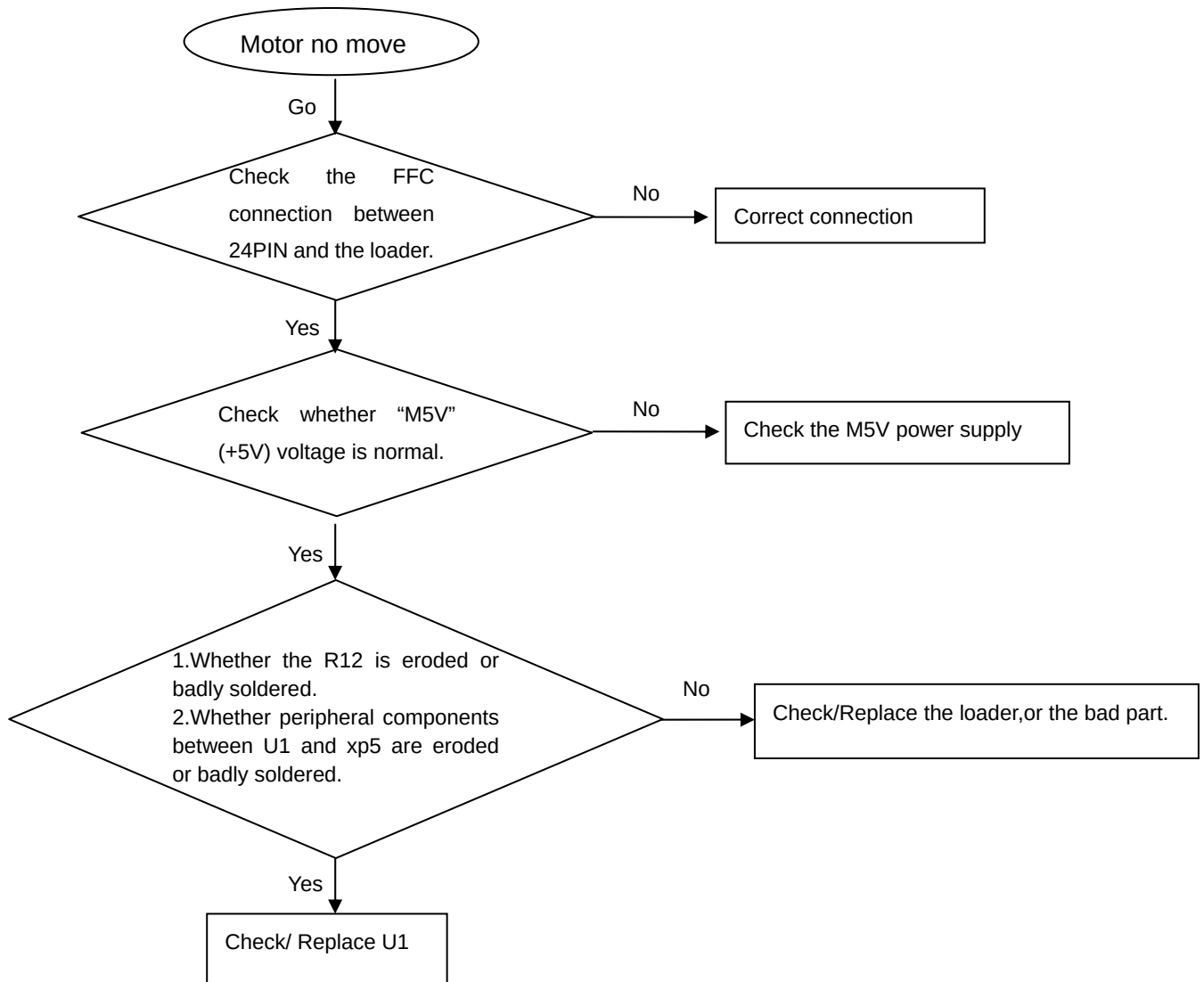
B. Read out the software versions to confirm upgrading

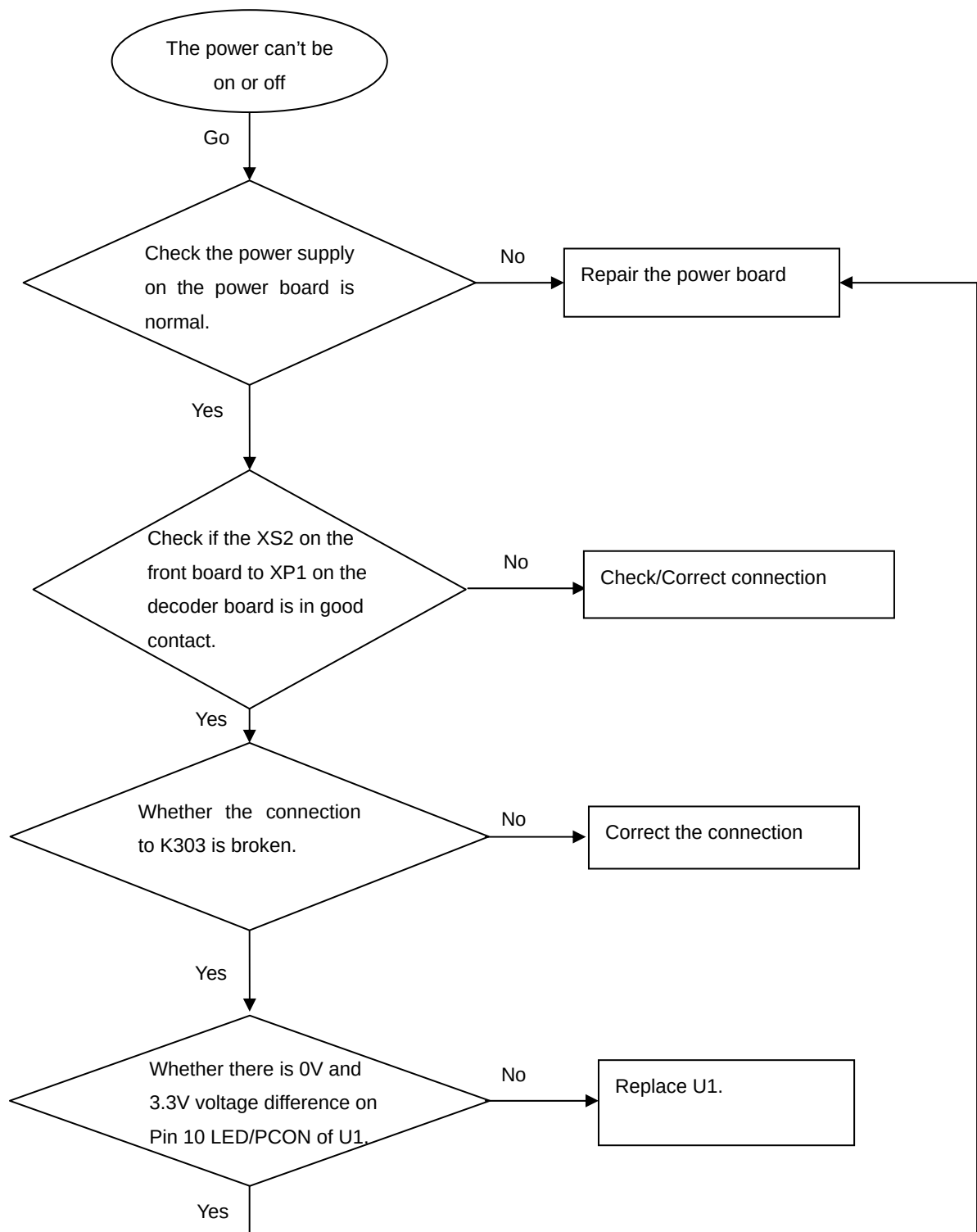
- 1) Power on the set and press <Setup> button on the remote control.
- 2) Press <Up><Next>< Up >< Up ><OK> button.

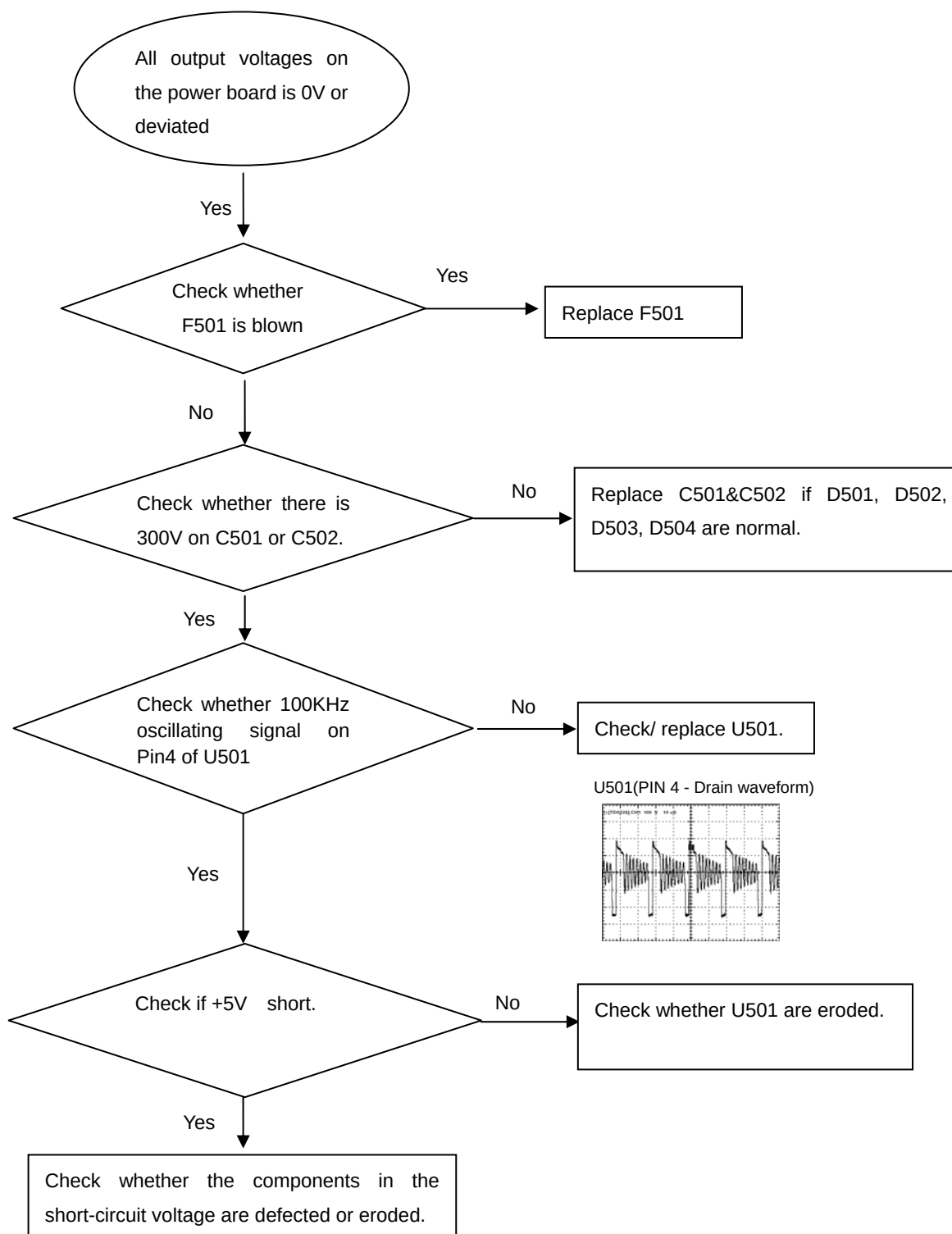
The software version and other information are display on the TV screen as follows:

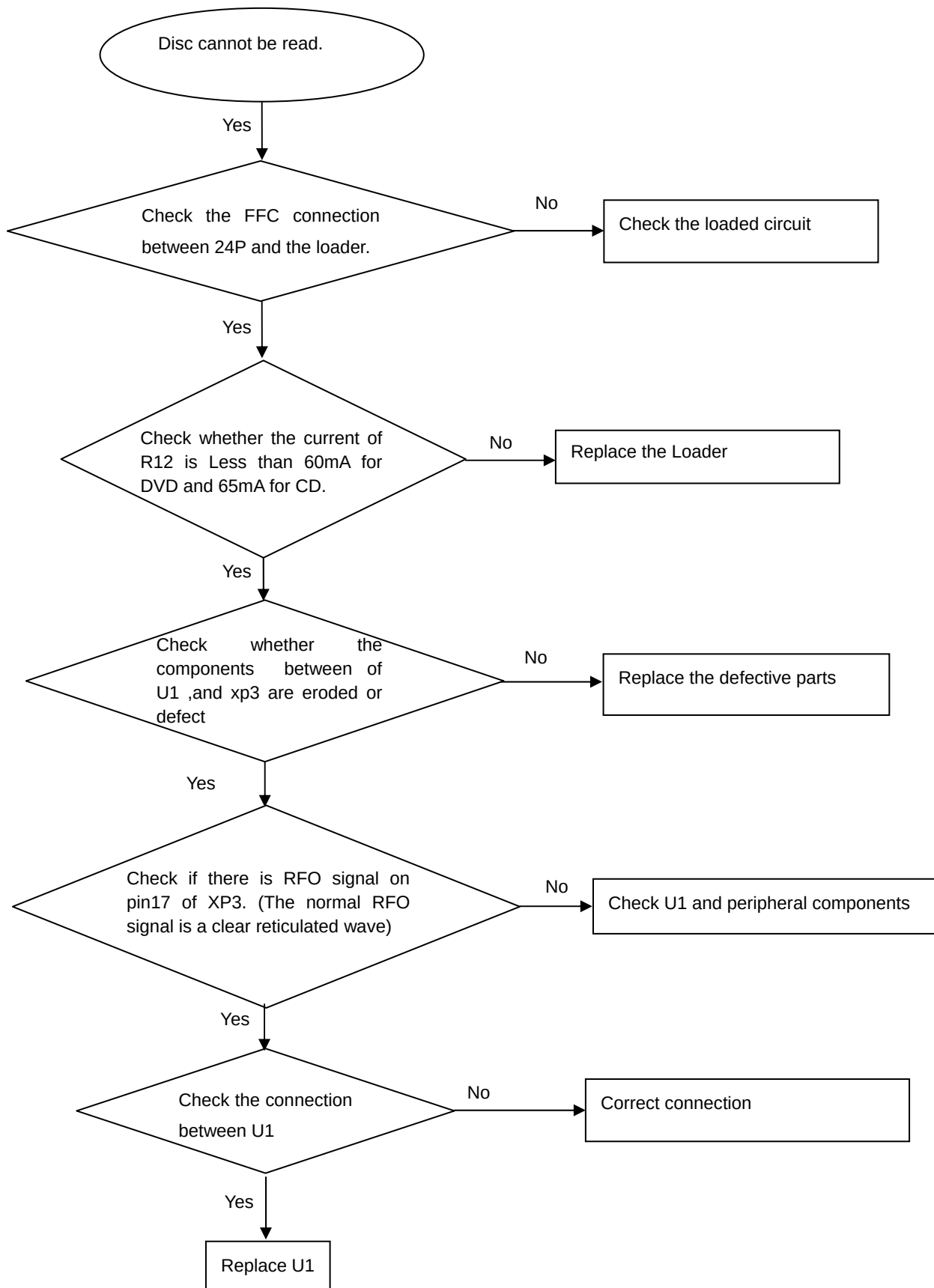
Model	DVP3XXX_XX
File Name	DVPXXXX_XX.BIN
Version	XX.XX.XX.XX
8203RX	XX.XX.XX.XX
RISC	XXXXXX-XXX-XXX
Servo	XXXXX-XXX-XXXX
Region Code	X

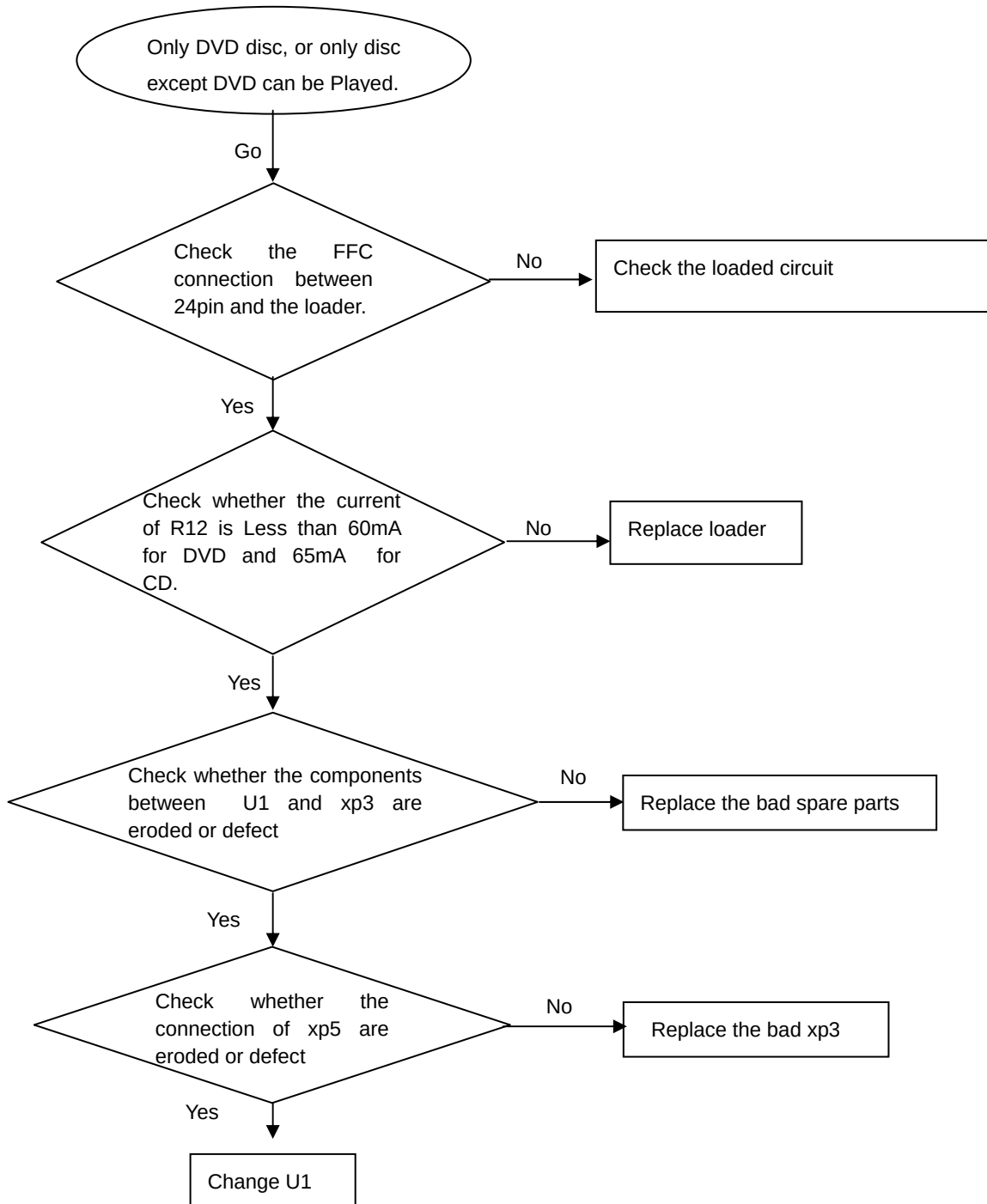
Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

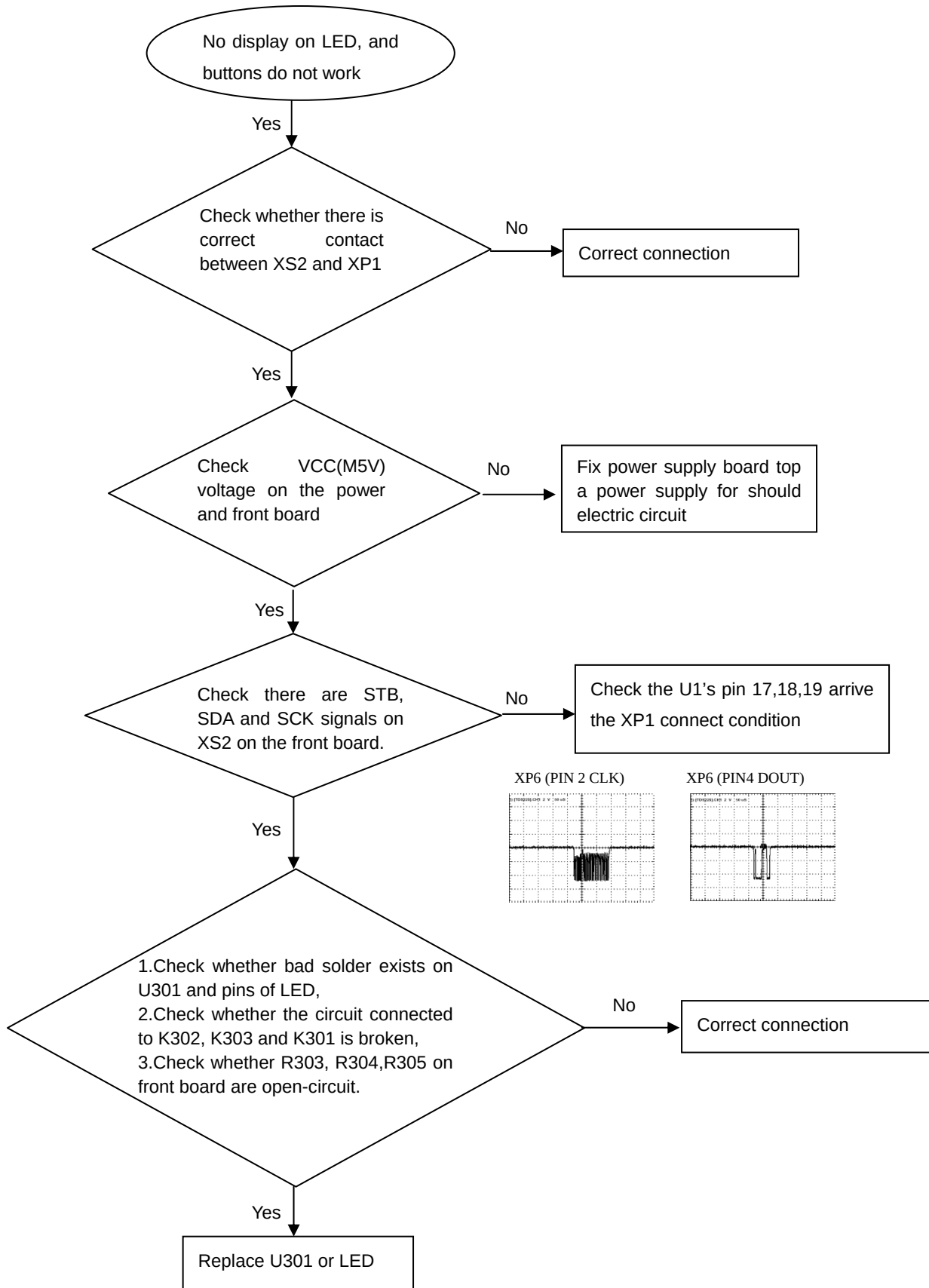
Spindle motor does not move

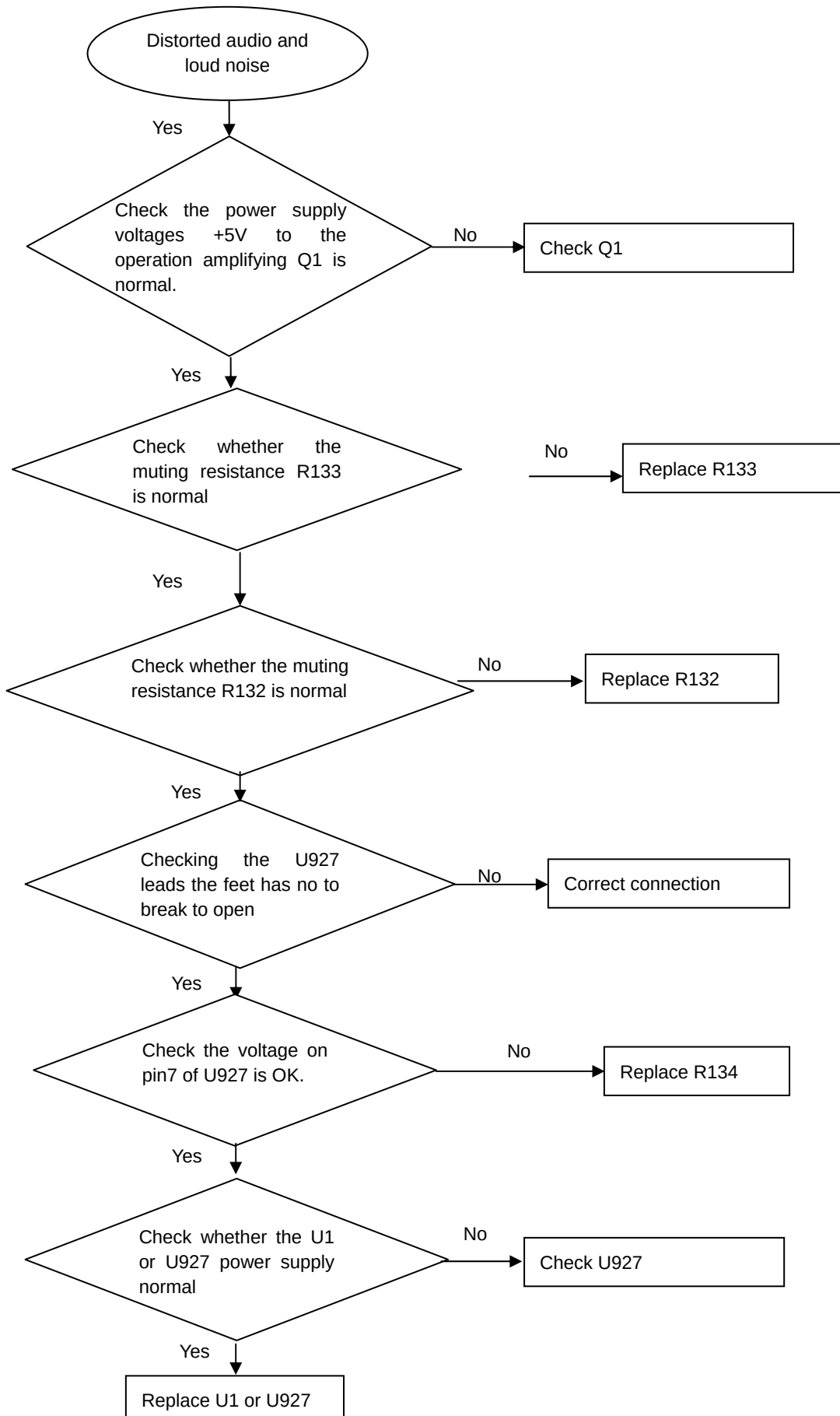
The power can not be on or off

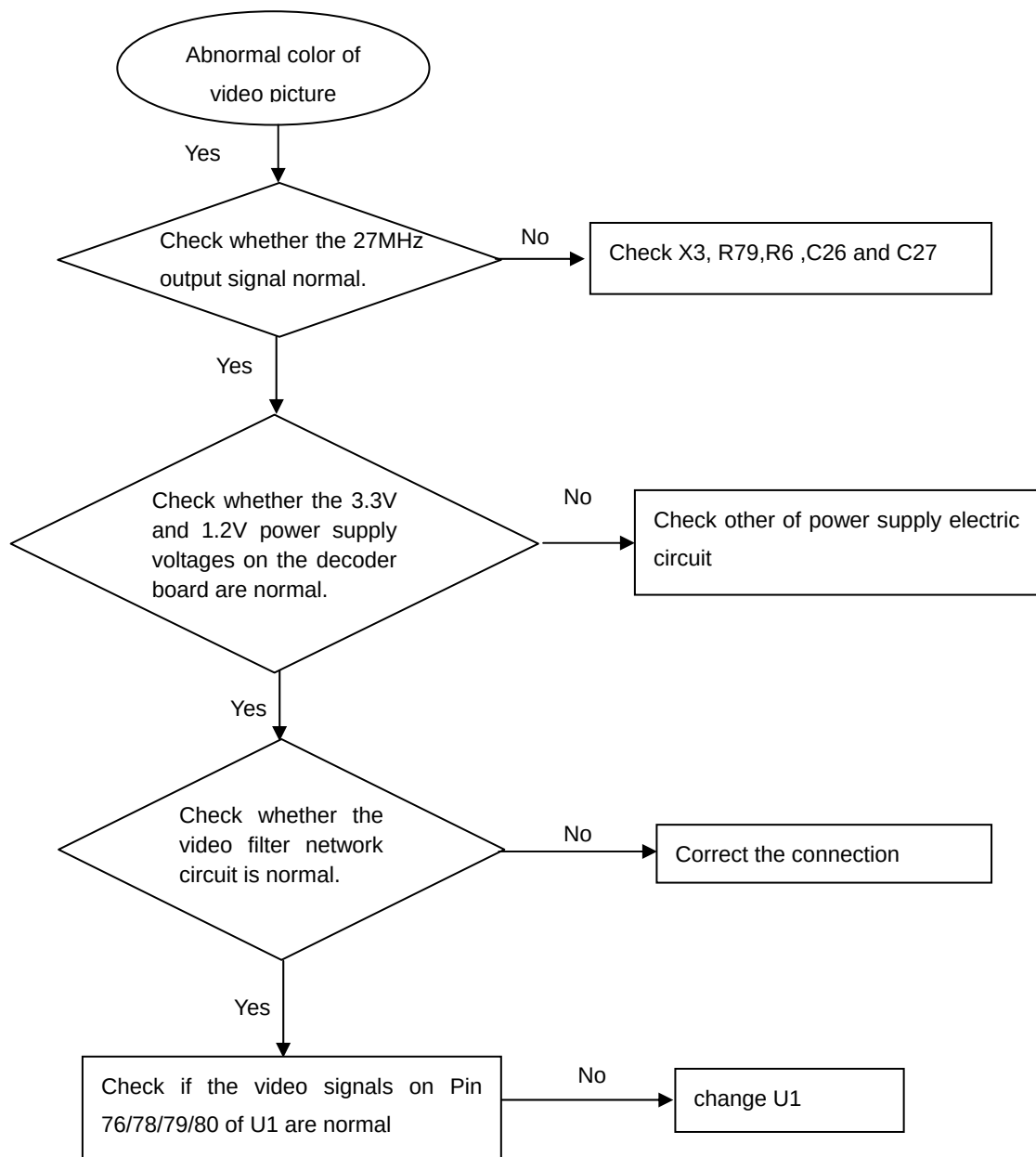
All output voltages on the power board is 0V or deviated.

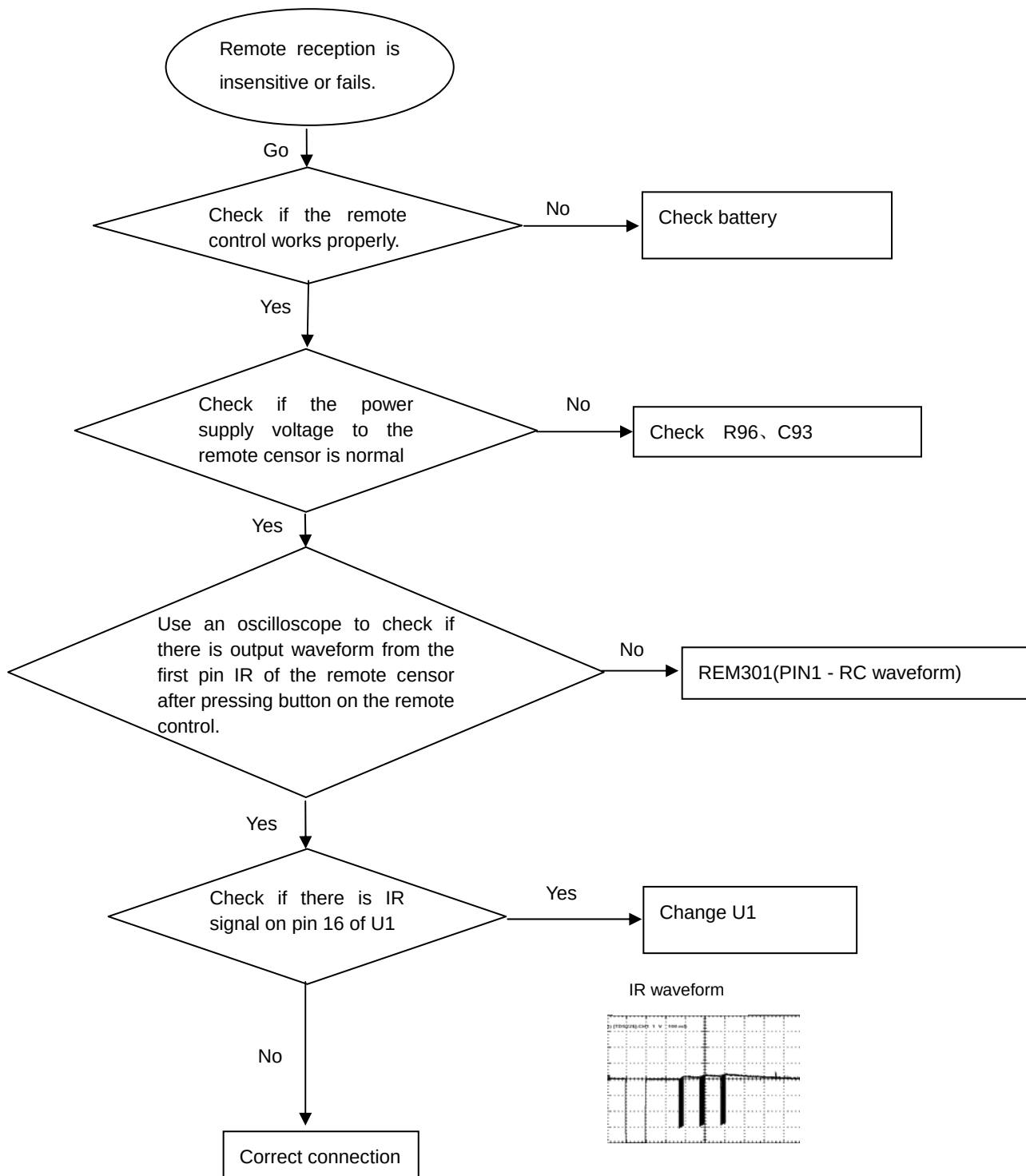
Disc cannot be read.

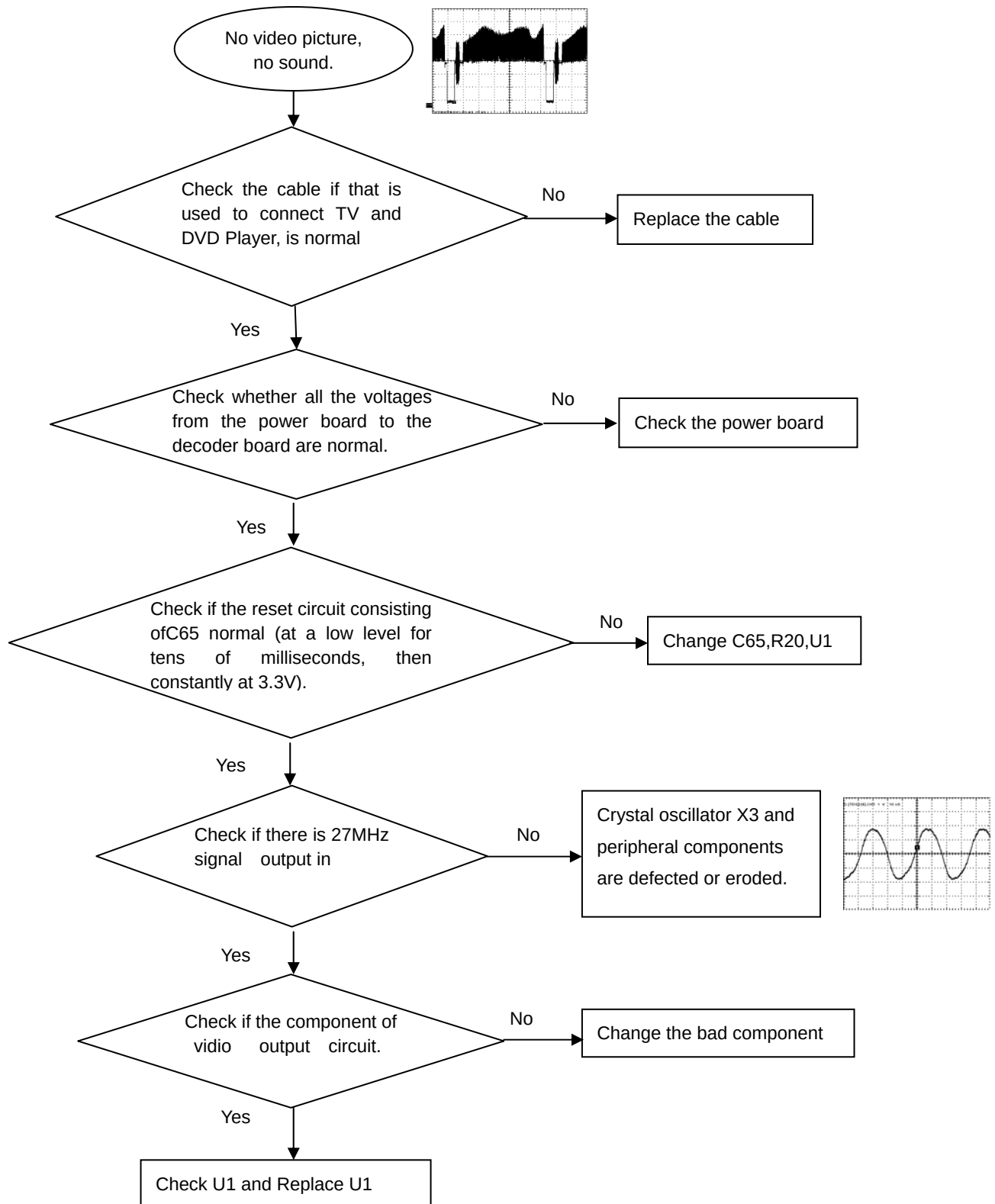
Only DVD disc or only disc except DVD can be played

No display on LED, and buttons do not work

Distorted audio and loud noise

Abnormal color of video picture

Remote reception is insensitive or fails.

No video picture, no sound.

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

The following guidelines show how to dismantle the player.

Step1: Remove 5 screws around the Top Cover, and then remove the Top Cover (Figure 1).

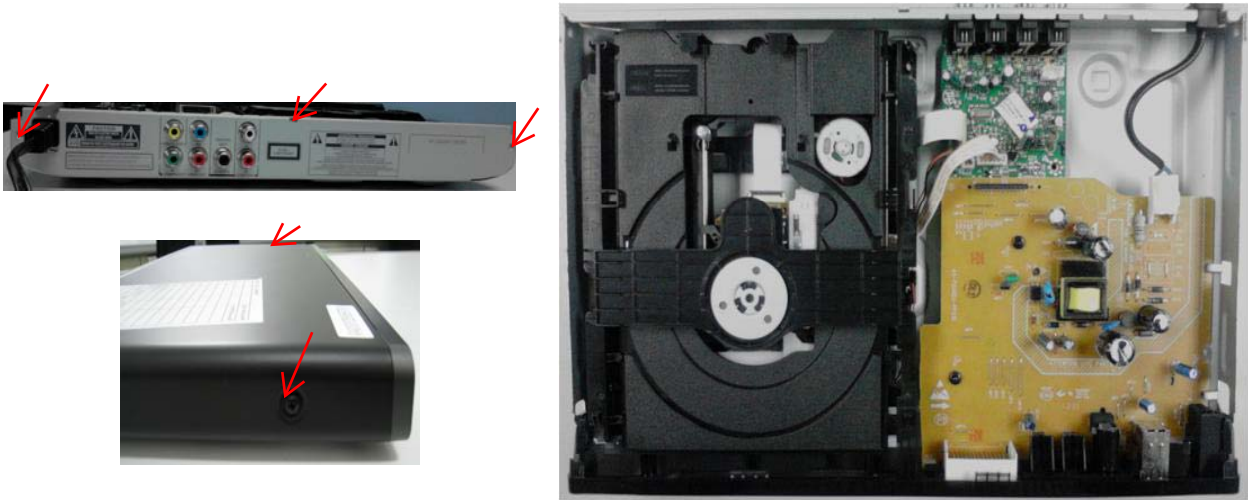


Figure 1

Step2: If it is necessary to dismantle Loader or Front Panel, the Front door should be removed first. (Figure 2)

Note: Make sure to operate gently otherwise the guider would be damaged.



Please kindly note that dismantle the front door assembly carefully to avoid damage tray and the front door.

Figure 2

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

Step3: If the tray can't open in normal way, you can make it through the instruction as below (Figure 3).

Note: Make sure to operate gently otherwise the guider would be damaged.



Figure 3

Step4: Dismantling Front Panel, need release 2 snaps of Front Panel & 2 snaps of bottom cabinet , then gently pull the Panel out from the set. (Figure 4)



Figure 4

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

Step5: Dismantling Loader, disconnect the 3 connectors (XP5, XP8, XP9) aiming in the below figure, and remove 1 screw that connects the loader and the bottom cabinet. (Figure 5)

Step6: Dismantling Power & Front Control Board, remove 3 screws on the board. (Figure 5)

Step7: Dismantling Main Board. Remove 1 screw on the board. (Figure 5)

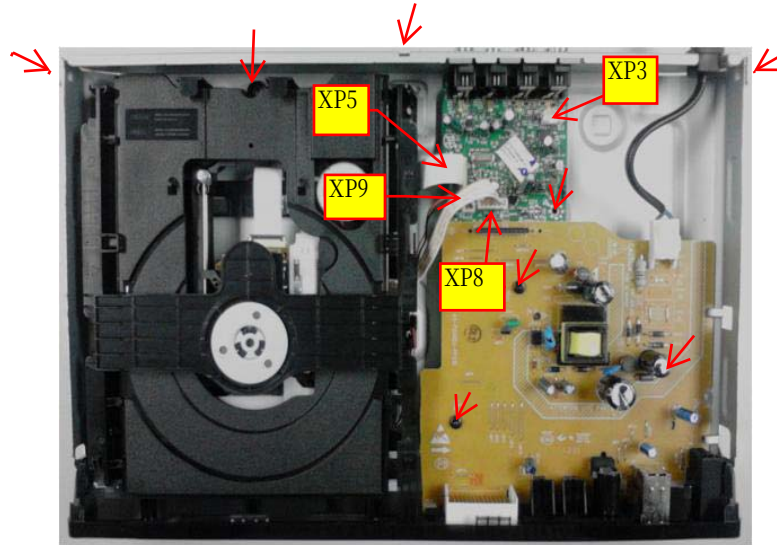
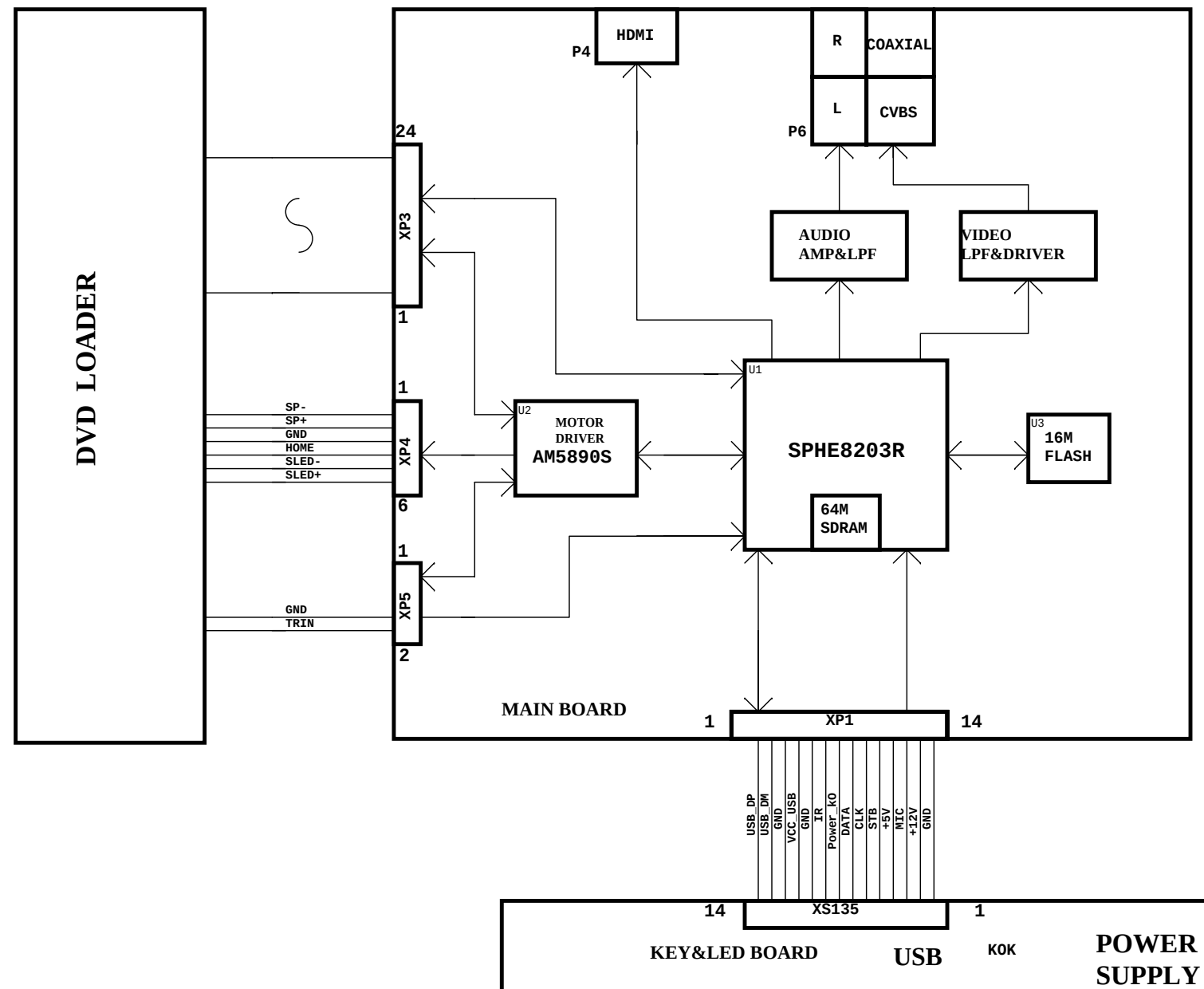
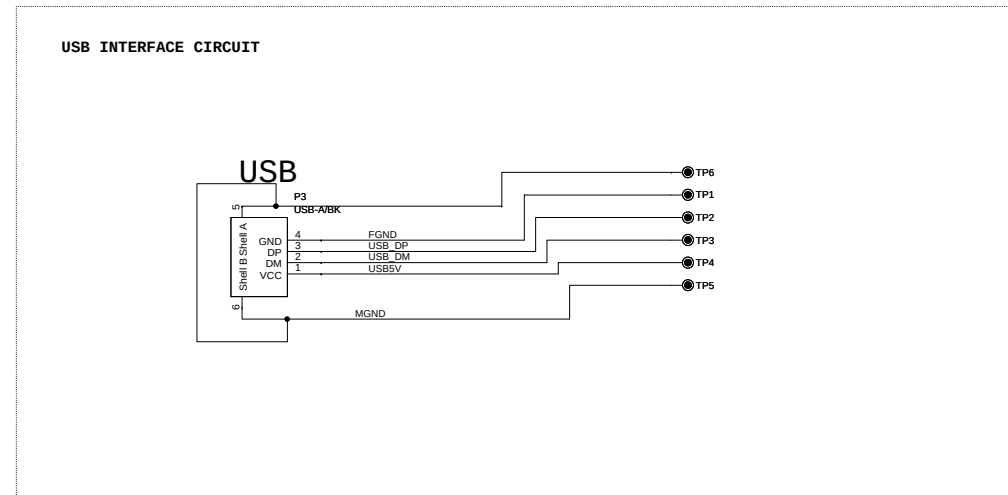


Figure 5

Wiring and Block Diagram for DVP2880:

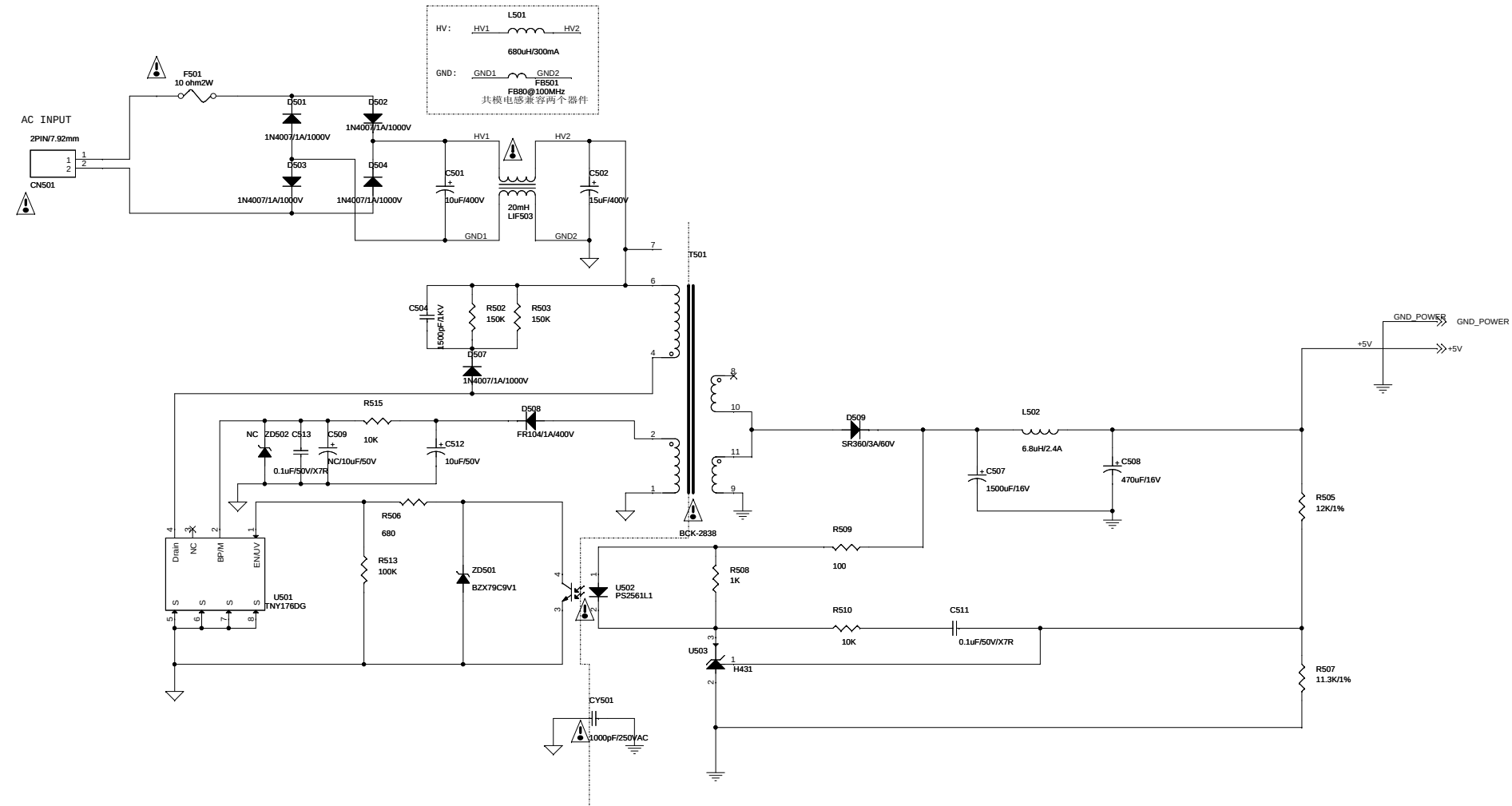


USB Board Circuit Diagram:

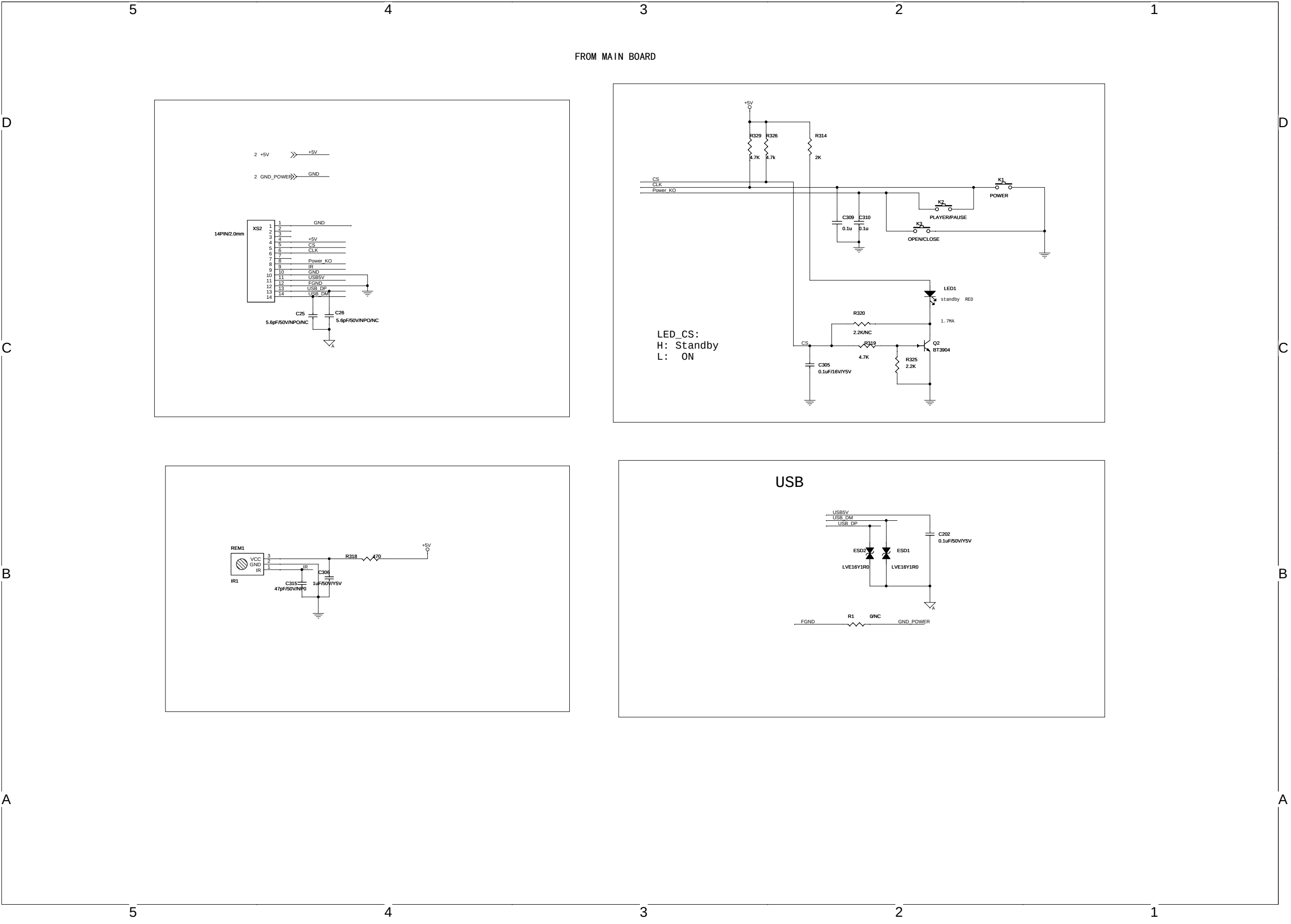


Power & Front Control Board Circuit Diagram:Power Supply

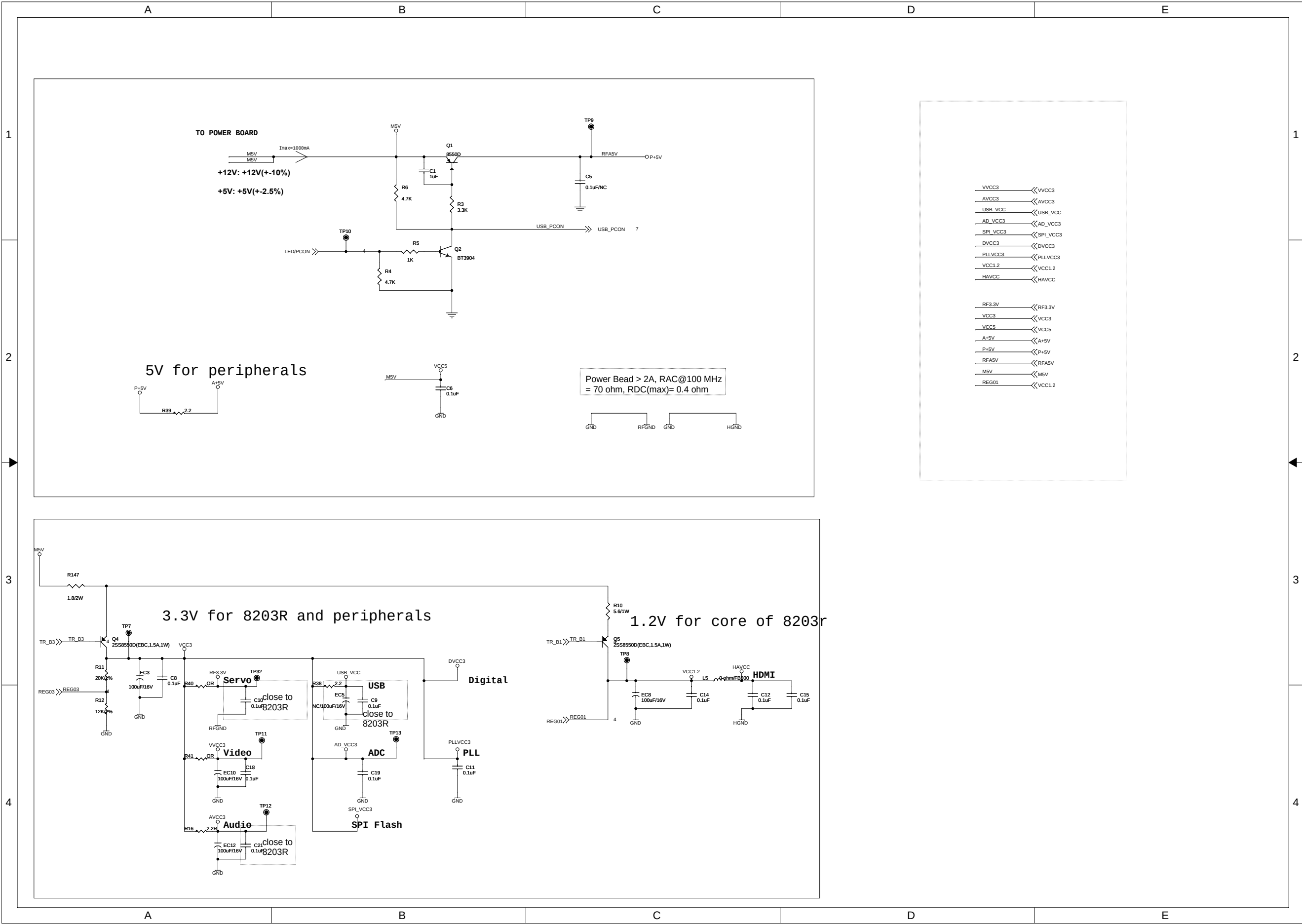
*** CAUTION :**
THE PARTS MARKED WITH  ARE IMPORTANT PARTS ON THE SAFETY.
PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.



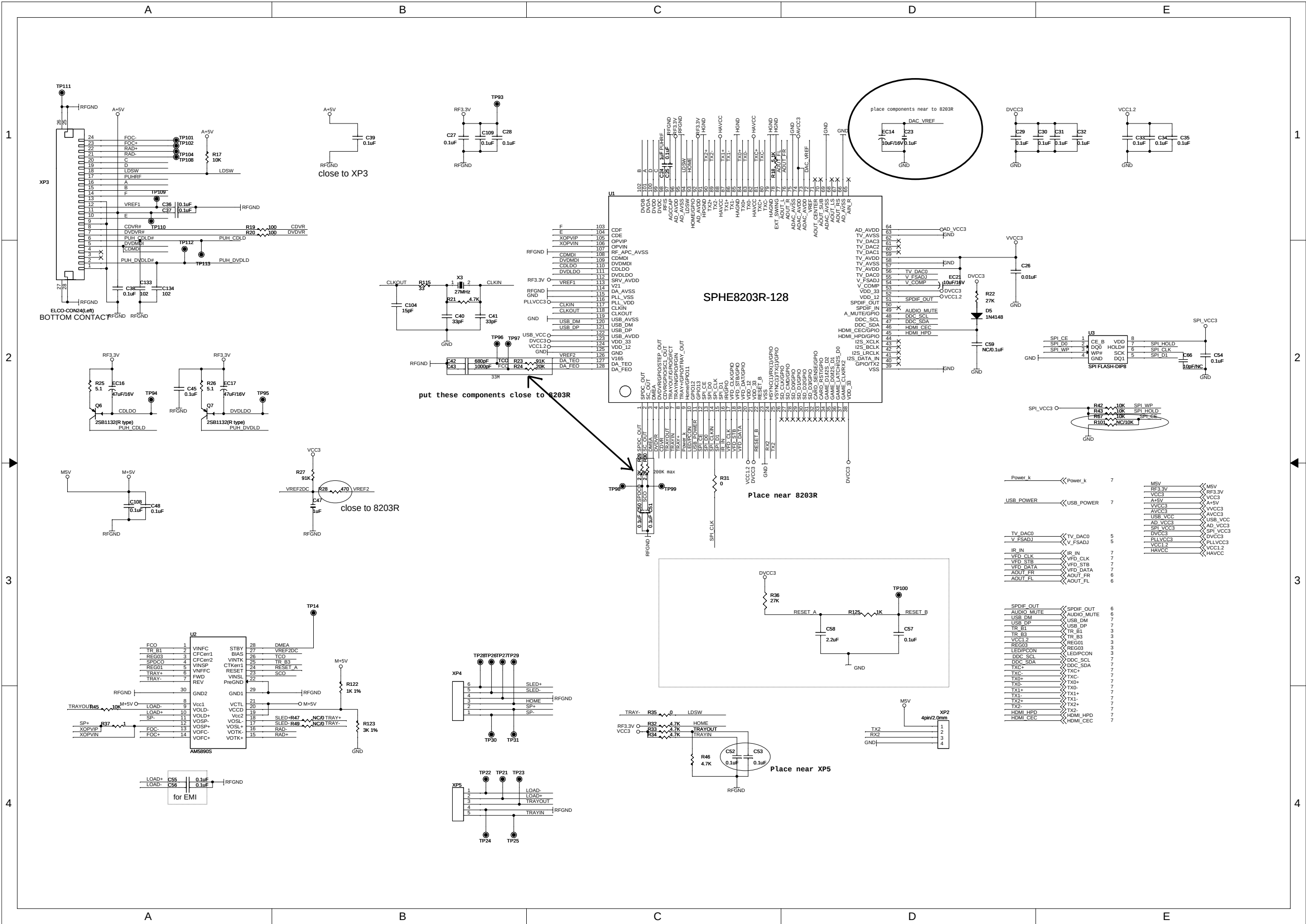
Power Board Circuit Diagram:FRONT & USB



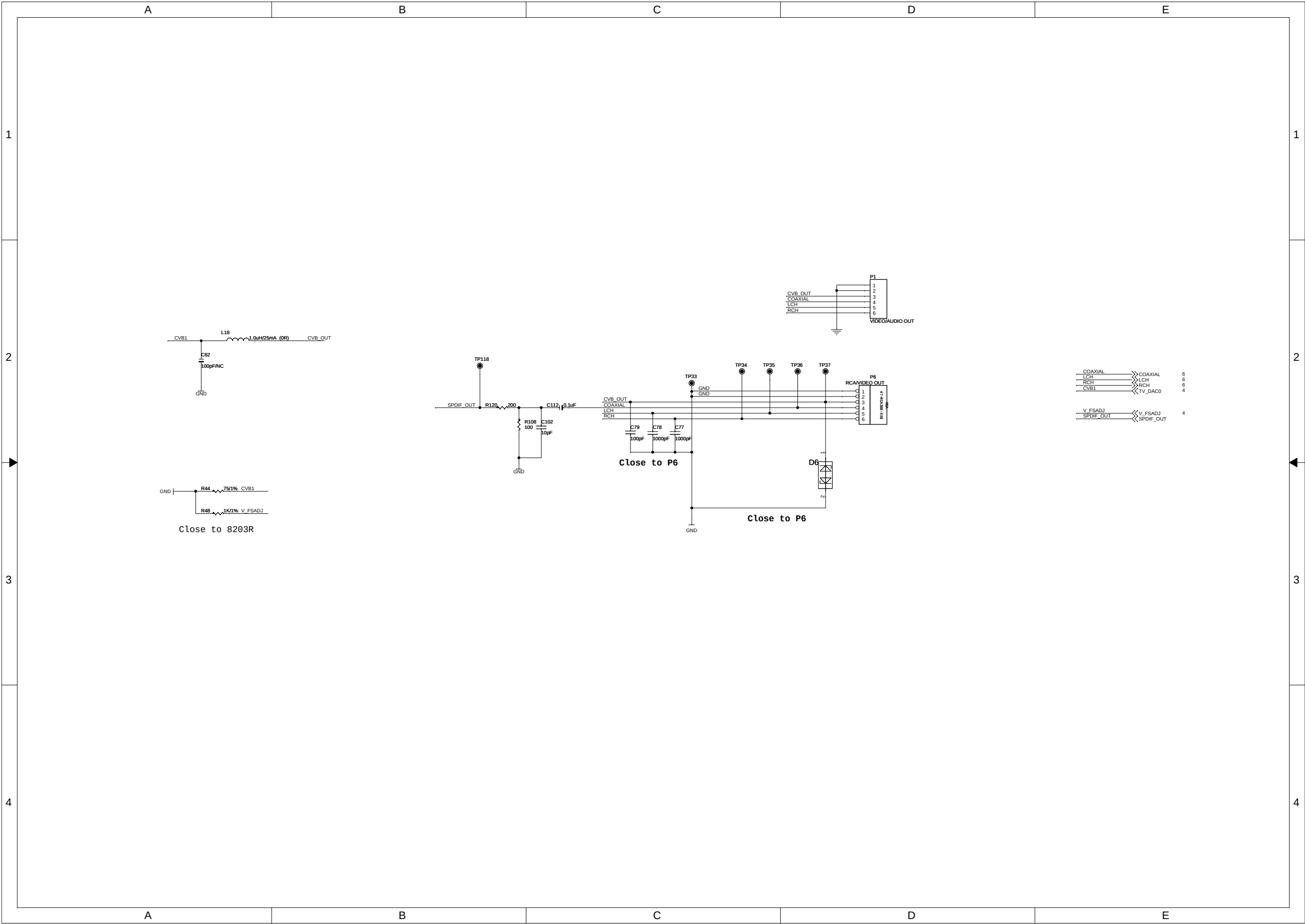
Main Board Circuit Diagram:POWER



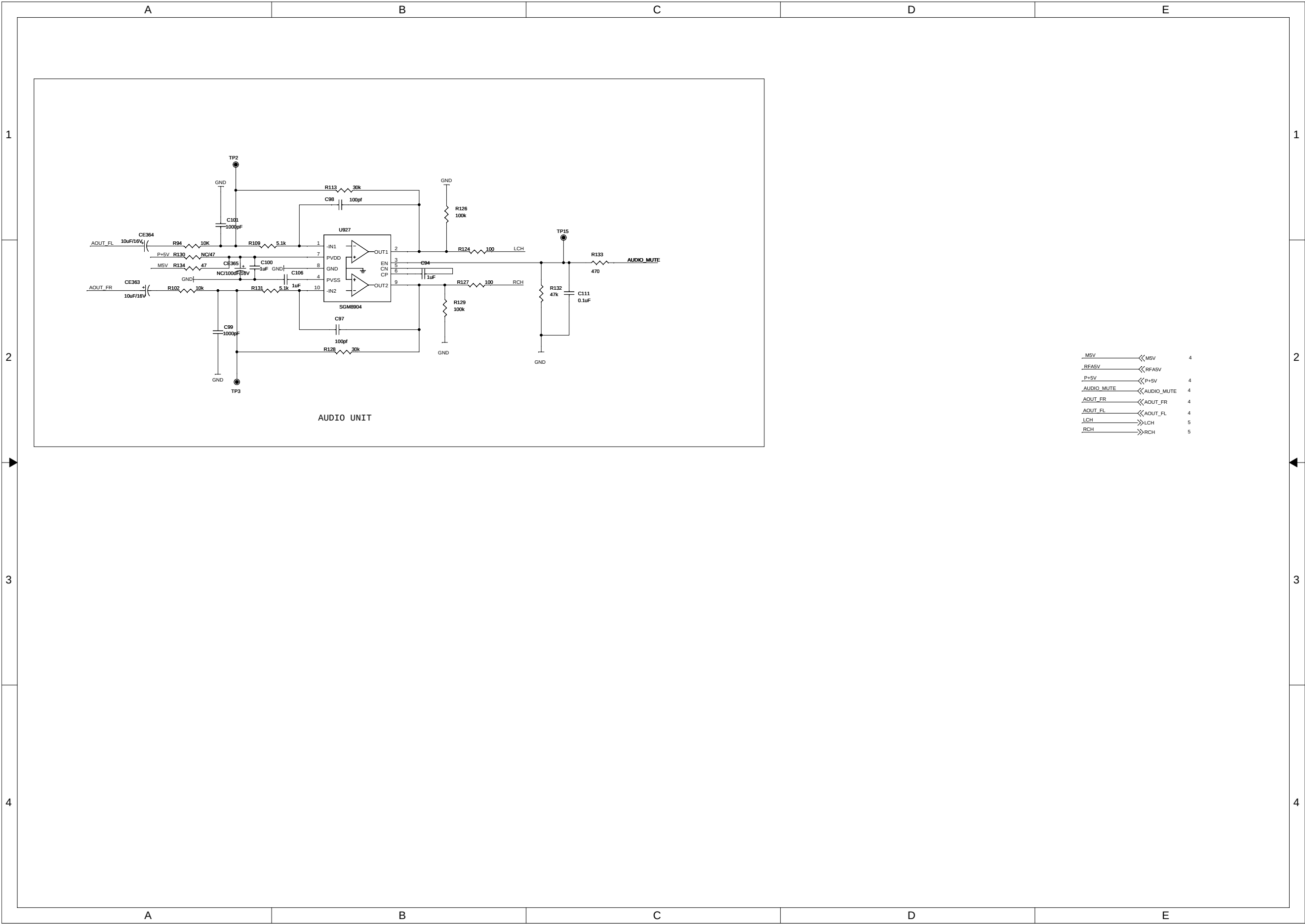
Main Board Circuit Diagram:SPHE8203R



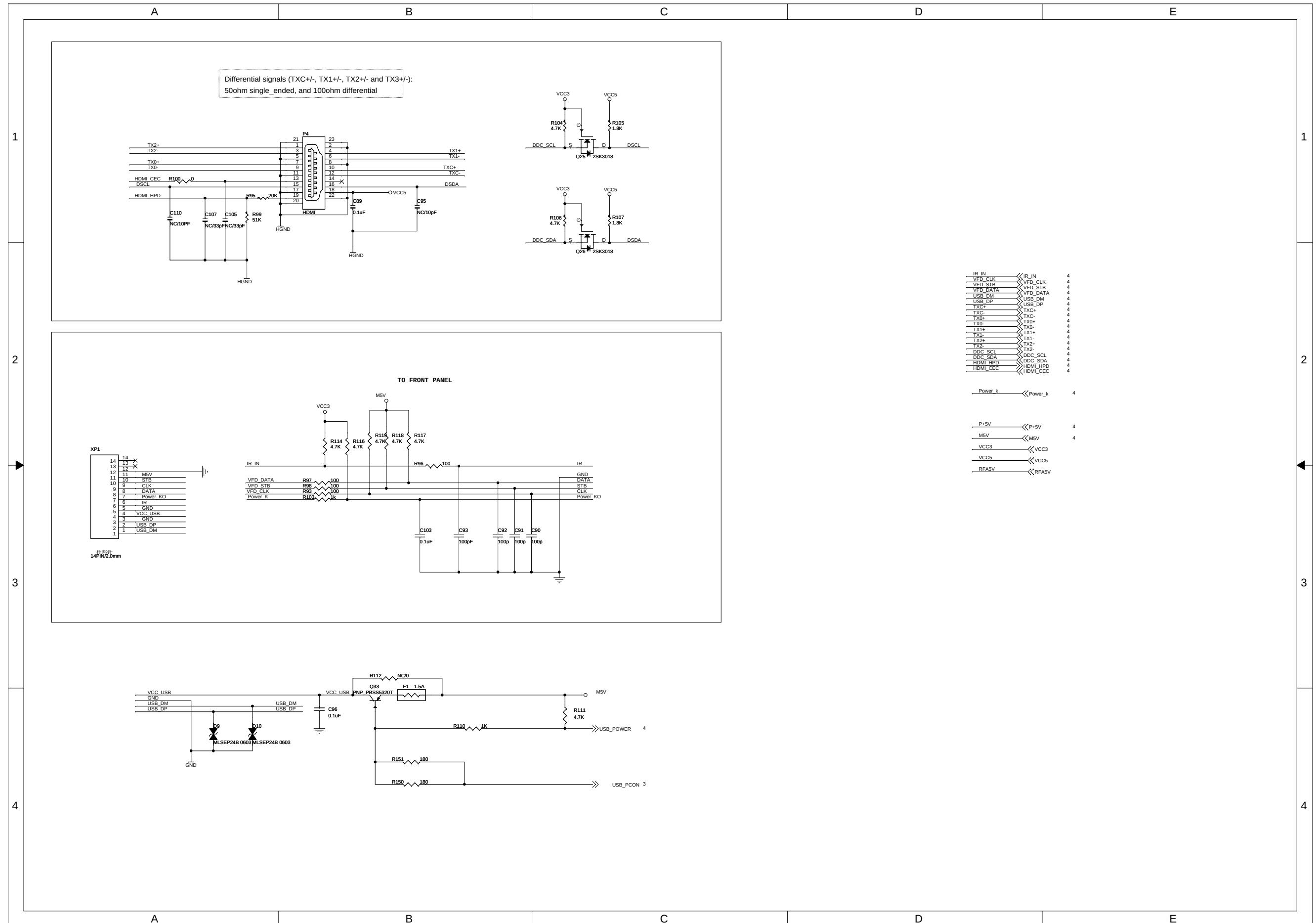
Main Board Circuit Diagram:VIDEO



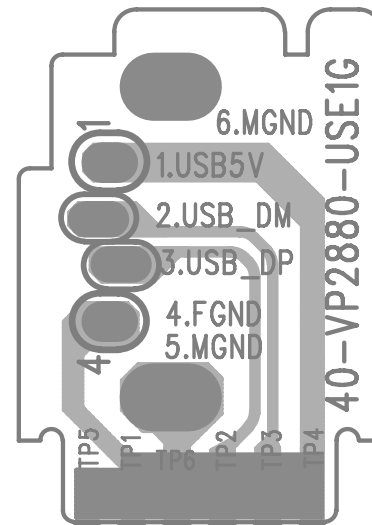
Main Board Circuit Diagram:AUDIO



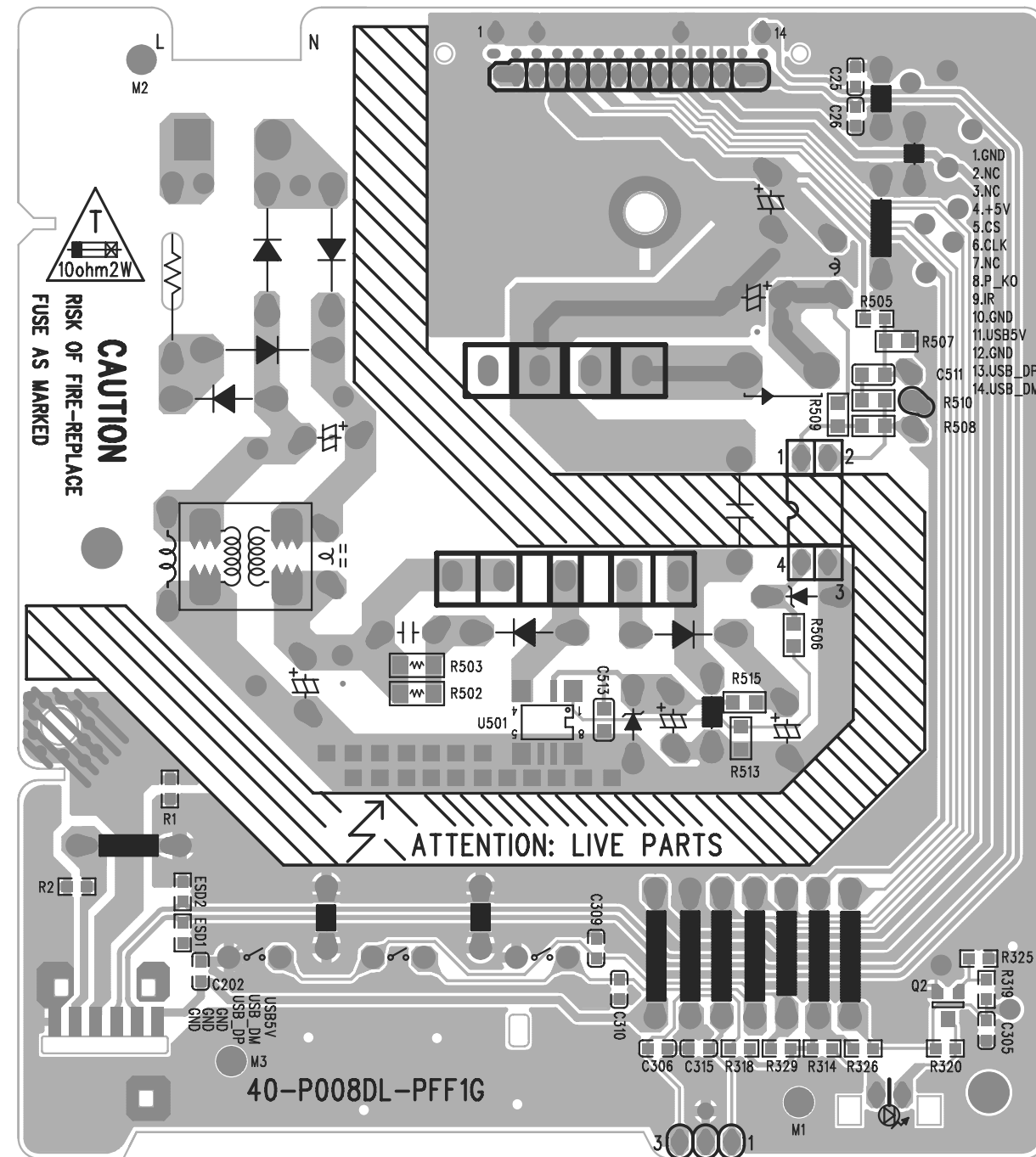
Main Board Circuit Diagram:HDMI&USB



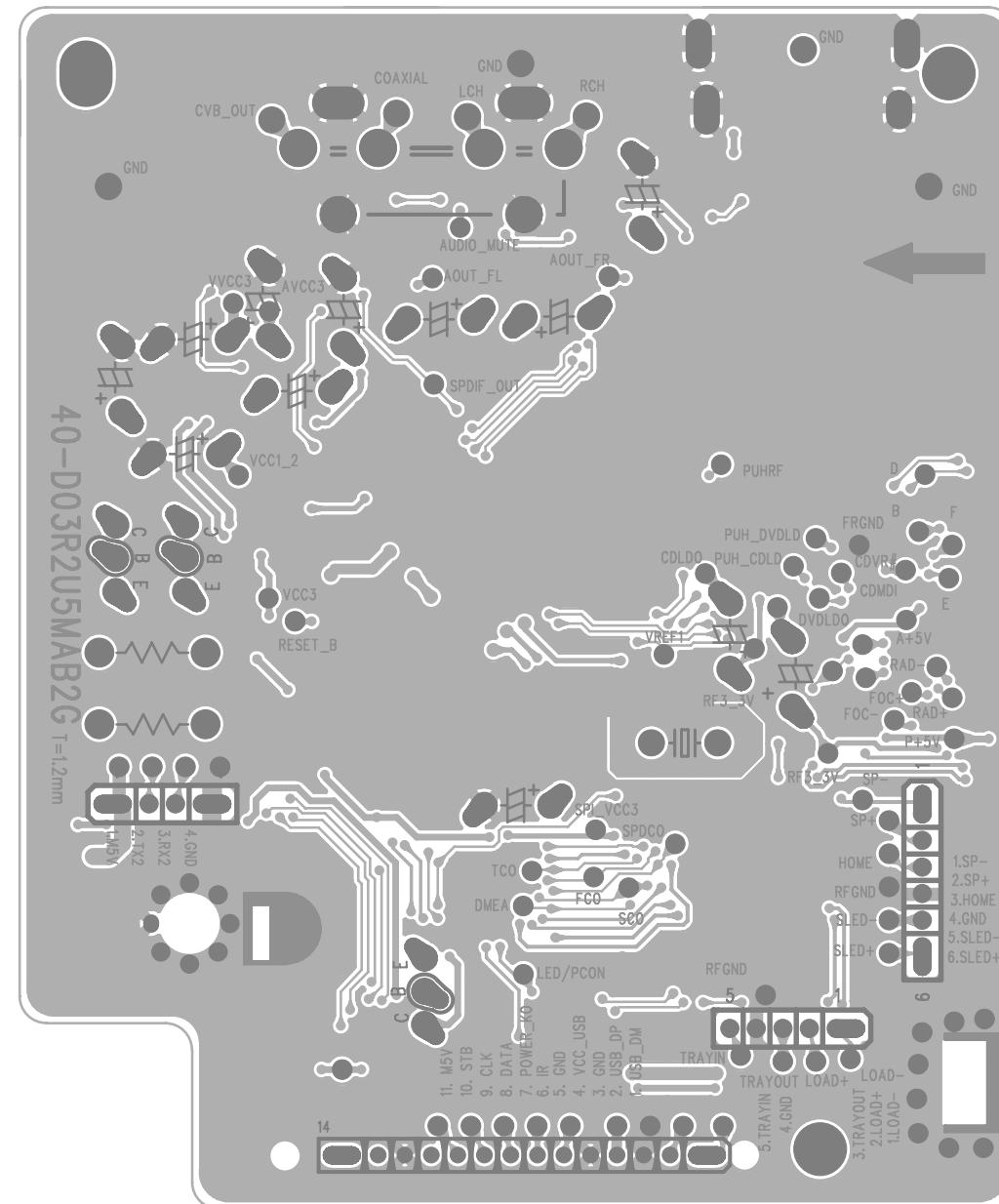
USB Board Print-layout(bottom side):



Power & Front Control Board Print-layout(bottom side):



Main Board Print-layout(bottom side):



40-D03R2U5MAB2G T=1.2mm

1. SP- 4. GND
2. SP+ 5. SLED
3. HOME 6. SLED

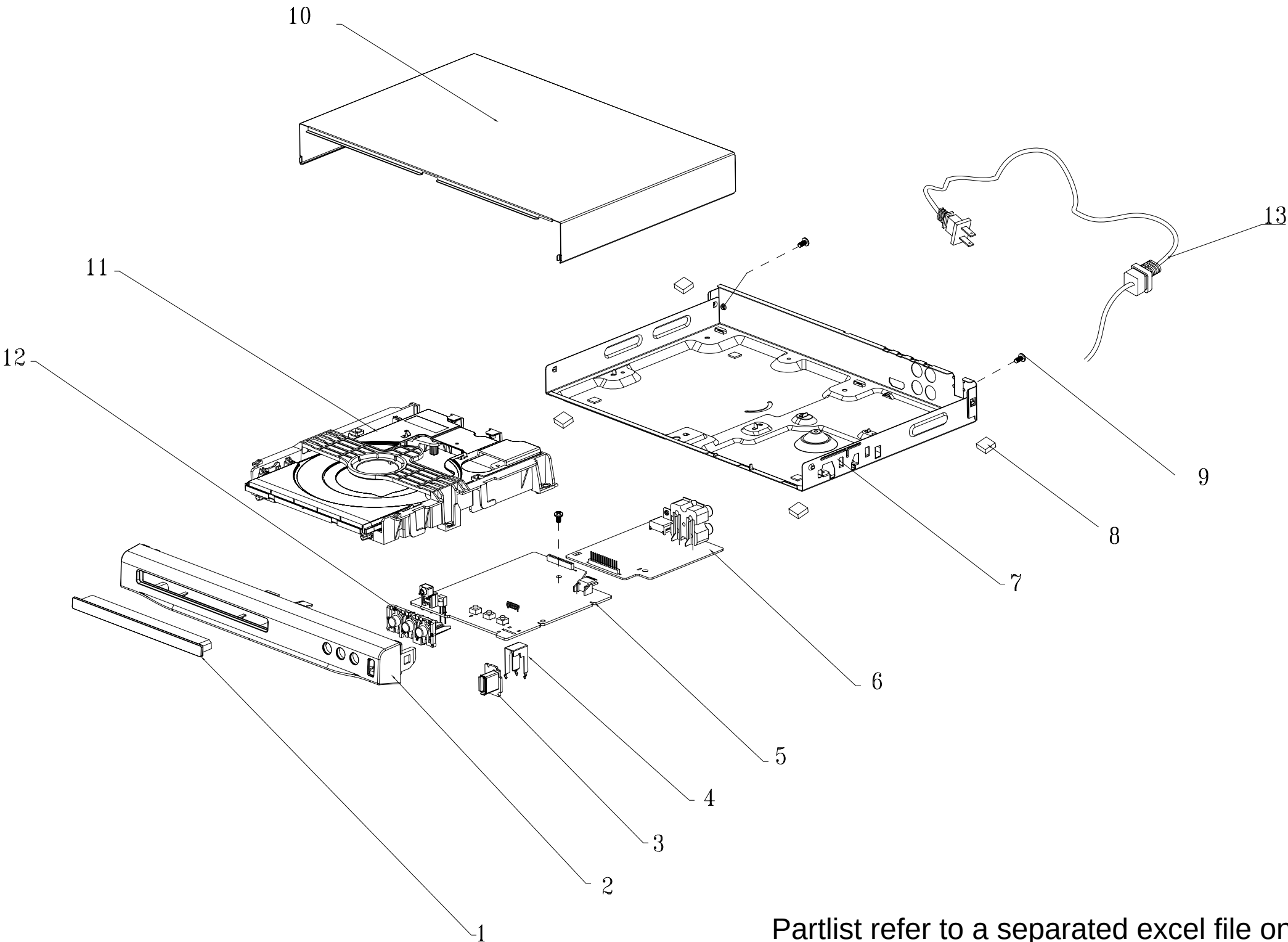
XP4

XP5

1. GND 2. VCC 3. GND 4. VCC 5. GND 6. VCC 7. POWER_KO 8. DATA 9. CLK 10. STB 11. MSV

XP1

Exploded View For DVP2880:



Partlist refer to a separated excel file on FYP

Revision List

V1.0 2013-1-10 Initial Release for DVP2880/98.

V1.1 2013-1-31 Initial Release for DVP2880/61/79/93.

V1.2 2013-2-28 Initial Release for DVP2880/F8/05/55.

V1.3 2013-12-27 Initial Release for DVP2880/40.

V1.4 2014-1-22 Initial Release for DVP2880/62.

V1.5 2014-4-28 Initial Release for DVP2880X/77.